

VISN 21 DRUG USE CRITERIA

February 2005

Formulary

Generic Name: Methylergonovine maleate
Trade Name: Methergine®
Drug Form: Oral, Injectable

Uses:

- Appropriate Indications
 1. Reduce active uterine bleeding related to:
 - a. Postpartum delivery
 - b. Post dilation and curettage
 - c. Uterine arteriovenous malformation
- Inappropriate Indications
 1. Prophylaxis of uterine bleeding
 2. Essential menorrhagia

Formulary Restrictions:

Restricted to usage criteria as outlined above.

Drug Therapy Selection:

- Efficacy

Methylergonovine maleate acts directly on uterine smooth muscle to increase the tone, rate and amplitude of rhythmic contractions. It is a partial agonist in the human umbilical and placental blood vessels. It also has an effect on the nonpregnant uterus. The majority of its side effects are caused by selectivity in various smooth muscles and partial agonist and antagonist properties in areas of the central nervous system (CNS). Its use in gynecology is not well documented, but is established that there is no practical use in essential menorrhagia. There is a case report citing the use of methylergonovine in the treatment of uterine arteriovenous malformation.
- Safety

The most common side effects are nausea and vomiting. Headache, dizziness, muscle pains, leg weakness, numbness and tingling of the fingers and toes can also occur. Pain suggestive of angina pectoris, transient tachycardia or bradycardia, localized edema and itching have been reported. There have also been reports of coronary vasospasms, myocardial ischemia, and pulmonary edema.

 - Contraindications
 1. Hypersensitivity to methylergonovine
 2. Pregnancy
 3. Toxemia
 4. Uncontrolled hypertension

- 5. Intra-arterial or periarterial injection
- Precautions
 - 1. Sepsis
 - 2. Obliterative vascular disease
 - 3. Hepatic impairment
 - 4. Renal impairment
 - 5. Second-stage labor
 - 6. Intravenous administration (must infuse over 1 minute while monitoring blood pressure)
 - 7. Drug interactions (as listed below)
- Cost

Methylergonovine maleate is available as 0.2mg tablets in bottles of #100 for \$44.78. The injectable form is 0.2mg/ml in packages of #20-1ml ampules for \$49.00.
- Risks

METHERGINE® (methylergonovine maleate) and **BRETHINE®** (terbutaline sulfate) have been involved with look-alike packaging errors. Both of these products are packaged as 1 mL ampuls within an amber plastic tub covered by a foil label with the product name in tiny print, making them difficult to tell. Both ampuls also have similar colored "rings" around the ampul necks that can be seen through the amber plastic. If methylergonovine is administered pre-term this can result in fetal and/or maternal harm.

Duplicative Therapy:

Misoprostol (Cytotec®)

Dosing:

Due to the instability of methylergonovine parenteral products should be inspected for discoloration and particulate matter prior to administration. For intravenous and intramuscular, administer 0.2mg which may be repeated at 2 to 4 hour intervals. Intravenous administration is hazardous and should be reserved for emergency control of postpartum hemorrhage. Methylergonovine intravenous should be given over 1 minute while carefully monitoring blood pressure. Intra-arterial or periarterial injection must be avoided. Orally, 0.2mg may be given 3 to 4 times daily for a maximum of 1 week.

Drug Interactions:

- Methylergonovine should be used with caution in combination with vasoconstrictors or ergot alkaloids.
- Dinoprostone (uterine hyperstimulation)
- Naratriptan, rizatriptan and zolmitriptan (vasospastic reactions) is contraindicated with methylergonovine.

- Increased serum concentrations of methylergonovine with resultant increased risk of ergotism (nausea, vomiting, vasospastic ischemia) may be seen if used in combination with delavirdine, efavirenz, nelfinavir, and saquinavir.
- Grapefruit juice in combination with methylergonovine can result in increased methylergonovine plasma concentrations which may lead to vasospasms.

Laboratory Test Interactions

None reported.

Recommended Patient Monitoring:

- ◆ Vitals (blood pressure, heart rate)
- ◆ Uterine hyperactivity

Outcome Measures:

- ◆ Therapeutic
 1. Uterine bleeding control
- ◆ Safety/Adverse Effects
 1. Cardiovascular stimulation (angina pectoris, transient tachycardia or bradycardia)
 2. Pulmonary edema

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